THE BRODIE CLUB

Minutes of the 863rd meeting of THE BRODIE CLUB,
held December 18, 1990, in the Faunal Lab, University of Toronto.

Carrick was chairman, Bodsworth was recording secretary.

There were twelve members present, and three guests. Guests were Margaret Bodsworth, guest of Bodsworth, Mary Tasker, guest of Tasker, and Jennifer Young, guest of Young.

Minutes of the previous meeting were read by Speakman, who had been recording secretary for that meeting, and since there were no suggested alterations they were declared approved by the chairman.

ANNOUNCEMENTS:

Norman Martin, the club's Federation of Ontario Naturalists representative, tabled the following announcements: 1. There is to be a new, weekly, TV-Ontario children's show on environment. 2. Environment Canada is making funds available for projects to mark Canadian environment week, June 2nd to 8th, 1991, and is asking for proposals. 3. The Royal Ontario Museum will be presenting a major wildlife art exhibition of 150 paintings, sketches and sculptures by wildlife artists Canadian George McLean and Americans Ken Bunn and Bob Kuhn. Also, the final section of ROM's spectacular new gallery of birds opened December 15th.

Carrick reported that he would be making further representations to the Canadian Wildlife Service regarding their cancellation of his license for keeping wildfowl. The cancellation has stopped his experiments by which he hoped to induce a migration pattern in re-introduced species like the Trumpeter Swan by having them fly south behind a light aircraft. He also reported that provincial and federal government biologists were considering stopping biologist Harry Lumsden's efforts to re-introduce Trumpeter Swans to Southern Ontario.

Carrick read a letter from member Ken Reading on the problems and adventures Reading was encountering in geological work in Honduras.

SPEAKER:

The speaker was member John Riley who discussed his research on the geography and some of the distribution puzzles of the flora of Northern Ontario. The talk was illustrated with many excellent and evocative slides of flowers, plant communities and some striking aerial views of bog-fen types and other landforms.

More than 85 percent of Ontario lies north of the Mattawa and French Rivers. The region has a flora of 1,340 native species and 270 introduced species.

He dealt first with a number of southern and prairie species which have only marginally migrated into Northern Ontario. One of the sites that demonstrate this is La Cloche Peninsula on the north channel of Lake Huron which is the only place where limestone flats occur in the southern portion of Northern Ontario. Its species include Green Prairie Milkweed, Prairie Smoke, Blazing Star and Buttonbush.

A number of other species reach their northern range limits at Dawson Point at the north end of Lake Timiskaming. Some of them are Staghorn Sumac, Alternate-leaved Dogwood and Round-leaved Dogwood.

The speaker described routes by which plants appear to have migrated into northeastern Ontario. They are the Ottawa Valley, the Timiskaming Rift Valley and the Michigan Peninsula, which have slightly warmer climates, more diverse habitats, and higher soil lime levels. He then referred to the Algonquin highlands and other regions with thin soils and colder climates that were barriers or hurdles to plant migration.

Esker systems usually flanked by lakes and wetlands have allowed the northward spread of some southern tree species. He showed slides of the northernmost Red Maple and Red Pine forests on such esker landforms. The Red Pine stand was a disjunct occurrence 70 kilometers north of the species' normal range.

This and other northern pine stands are believed to be northward range extensions that occurred during the warmer Hypsithermal period from which the pines have not yet fully retreated.

Shifting attention to Northwestern Ontario, Rainy River and Lake of the Woods, the speaker said there are about 50 species there that do not occur anywhere else in Northern Ontario, yet it is interesting that many of them are in Southern Ontario where they are usually considered to be Carolinian species. More understandably, the northwestern region has a large number of prairie species that enter Ontario only in this area.

The real gem of the north, however, is the north shore of Lake Superior where foggy and cool summers create arctic-alpine conditions. Examples of northern species here are Alpine Chickweed, Arctic Fescue, Arctic Avens, Northern Saxifrage, Snowbed Cinquefoil, and the northern orchids Franklin's Lady-slipper and Northern Twayblade. Many of these arctic species also occur on the coast of Hudson Bay far to the north, but nowhere between.

The speaker dealt at some length with the Hudson Bay Lowland, its bog and fen types, and its flora. This region has the fastest

rate of postglacial uplift in North America, which in 10,000 years will spill all of Hudson Bay through Hudson Strait into the Atlantic. The Hudson Bay Lowland has emerged from the icesheet and ocean only in the last 6,000 years. Many of its species are believed to have migrated in from unglaciated refugiums to the northeast and northwest, and not, as one might expect, from unglaciated regions south of the icefront and Great Lakes.

More than 40 species are coastal halophytes found in Ontario only along the Hudson Bay coast, which must have come originally from the Atlantic coast. But how they made range extensions of many hundreds of miles without establishing colonies in between is a puzzle that tantalizes botanists. The speaker felt that transport by migrating birds was a reasonable explanation, but said botanists in general tend to be skeptical about birds as possible plant vectors.

Another tantalizing example of isolated, widely separated plant colonies is that of Aster alpinus, which grows in the western mountains, in a single location in the Hudson Bay Lowland, and then nowhere farther east until the Pyrenees of Europe.

Other sites described, and illustrated with striking slides, were Cape Henrietta Maria, the Sutton Ridges and the Attawapiskat River. Much botanical survey work in Northern Ontario remains to be done. The speaker described one occasion when he was landed by helicopter on the Sutton Ridges and in half an hour found five new species for Ontario.

Churcher asked if there were any changes in permafrost in current times. Riley replied that satellite images are showing disintegration of permafrost along streams and it is suggested that climate change may be the reason.

The speaker was thanked for a splendid presentation by Norman Martin.

NOTES AND OBSERVATIONS:

Young referred to recent media reports about possible health hazards in the use of mercury in tooth-filling amalgams, which has been a widespread dental practice for many years. He said this use of mercury was no longer permitted in Britain and Sweden.

Churcher reported self-seeding catalpas on south-facing slopes in Rosedale Ravine and the Don Valley. Riley added that Norway Maple had taken over some parts of Rosedale Ravine and is becoming recognized as a serious pest. It creates such a dense shade it destroys all understorey beneath it.

Speakman referred to Purple Loosestrife, a recent introduced species, which has become a pest that has taken over wetlands, and asked if there are any biological controls that could be used against it. Riley said it was a problem that needed more

research. Crins said it was such a vigorous colonizer of wetlands that it was even replacing cattails in some places.

Bodsworth reported there had been a Red-throated Loon on Lake Wilcox, north of Richmond Hill, since August and it was still there a few days ago, although the lake was now ice-covered except for a very small patch of open water in its centre.

Mary and Ron Tasker reported that 75,000 acres of the west end of Manitoulin Island was a superb wilderness area that was now under threat because the paper company that owns it is trying to sell it for cottage and lodge development. It is a magnificent area of hardwood forest, bogs, dunes and alvars. They said governments were not interested in it as a potential park because of the new federal park on Bruce Peninsula, not far away.

The meeting adjourned at 10.15 p.m.